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(54) Wireless communication device with waveform configuration and related methods

(57) A mobile wireless communications device may include an antenna, a transceiver coupled to the antenna, and a controller coupled to the transceiver. The controller may be configured to determine a received signal characteristic, and to configure parameters of a waveform for adjacent forward transmission blocks to be transmitted as sequential forward transmission blocks and based up-

on the received signal characteristic. Each forward transmission block may have a preamble portion and an associated body portion. The controller may be further configured to set the preamble portion of each forward transmission block to communicate the parameters of the configured waveform.

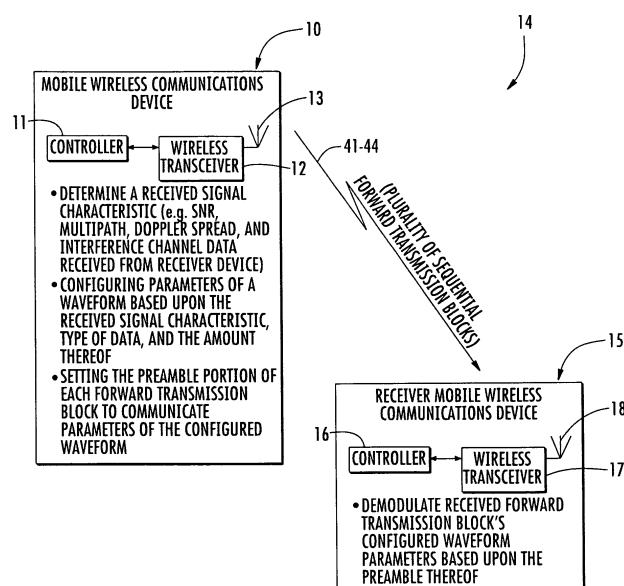


FIG. 1



EUROPEAN SEARCH REPORT

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DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
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Y	-----	2,3,9,10	H04B1/00
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Y	-----	2,9	
Y	US 2005/099992 A1 (SATO MASANORI [JP]) 12 May 2005 (2005-05-12) * paragraphs [0008], [0058], [0059]; figure 9 *		
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E	-& US 2011/096823 A1 (SAHARA TORU [JP]) 28 April 2011 (2011-04-28) * paragraphs [0014], [0015], [0020], [0051] - [0057] *	3,10	
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The present search report has been drawn up for all claims			
1	Place of search Munich	Date of completion of the search 27 March 2014	Examiner Stolte, Norbert
CATEGORY OF CITED DOCUMENTS			
X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document	

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CLAIMS INCURRING FEES

The present European patent application comprised at the time of filing claims for which payment was due.

Only part of the claims have been paid within the prescribed time limit. The present European search report has been drawn up for those claims for which no payment was due and for those claims for which claims fees have been paid, namely claim(s):

No claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for those claims for which no payment was due.

LACK OF UNITY OF INVENTION

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

see sheet B

All further search fees have been paid within the fixed time limit. The present European search report has been drawn up for all claims.

As all searchable claims could be searched without effort justifying an additional fee, the Search Division did not invite payment of any additional fee.

Only part of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the inventions in respect of which search fees have been paid, namely claims:

1-5, 8-10

None of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims, namely claims:

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The present supplementary European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims (Rule 164 (1) EPC).

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**LACK OF UNITY OF INVENTION
SHEET B**

Application Number

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The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

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1. claims: 1-5, 8-10

Configuring the parameters of the waveform further based upon a type of data in the body portion of each forward transmission block (as defined in claim 2)

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2. claim: 6

Configuring the parameters of the waveform using different bandwidths for each forward transmission block (as defined in claim 6).

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3. claim: 7

Each forward transmission block further comprises a channel estimate portion; and varying a length of the channel estimate portion for each forward transmission block (as defined in claim 7).

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ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.

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This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on. The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

27-03-2014

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For more details about this annex : see Official Journal of the European Patent Office, No. 12/82